

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Original)** A process for producing an antibody composition using a cell, which comprises using a cell into which a double-stranded RNA comprising an RNA selected from the following (a) or (b) and its complementary RNA is introduced:

(a) an RNA comprising the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30;

(b) an RNA consisting of a nucleotide sequence in which one or several nucleotide(s) is/are deleted, substituted, inserted and/or added in the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30 and having activity of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain.

2. **(Original)** The process according to claim 1, wherein the enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in the complex type N-glycoside-linked sugar chain is α 1,6-fucosyltransferase.

3. **(Original)** The process according to claim 2, wherein the α 1,6-fucosyltransferase is a protein encoded by a DNA selected from the group consisting of the following (a) to (h):

- (a) a DNA comprising the nucleotide sequence represented by SEQ ID NO:1;
- (b) a DNA comprising the nucleotide sequence represented by SEQ ID NO:2;
- (c) a DNA comprising the nucleotide sequence represented by SEQ ID NO:3;
- (d) a DNA comprising the nucleotide sequence represented by SEQ ID NO:4;
- (e) a DNA which hybridizes with a DNA consisting of the nucleotide sequence represented by SEQ ID NO:1 under stringent conditions and encodes a protein having α 1,6-fucosyltransferase activity;
- (f) a DNA which hybridizes with a DNA consisting of the nucleotide sequence represented by SEQ ID NO:2 under stringent conditions and encodes a protein having α 1,6-fucosyltransferase activity;
- (g) a DNA which hybridizes with a DNA consisting of the nucleotide sequence represented by SEQ ID NO:3 under stringent conditions and encodes a protein having α 1,6-fucosyltransferase activity;
- (h) a DNA which hybridizes with a DNA consisting of the nucleotide sequence represented by SEQ ID NO:4 under stringent conditions and encodes a protein having α 1,6-fucosyltransferase activity.

4. **(Original)** The process according to claim 2, wherein the α 1,6-fucosyltransferase is a protein selected from the group consisting of the following

(a) to (i):

- (a) a protein comprising the amino acid sequence represented by SEQ ID NO:5;
- (b) a protein comprising the amino acid sequence represented by SEQ ID NO:6;
- (c) a protein comprising the amino acid sequence represented by SEQ ID NO:7;
- (d) a protein comprising the amino acid sequence represented by SEQ ID NO:8;
- (e) a protein consisting of an amino acid sequence in which one or more amino acid(s) is/are deleted, substituted, inserted and/or added in the amino acid sequence represented by SEQ ID NO:5 and having α 1,6-fucosyltransferase activity;
- (f) a protein consisting of an amino acid sequence in which one or more amino acid(s) is/are deleted, substituted, inserted and/or added in the amino acid sequence represented by SEQ ID NO:6 and having α 1,6-fucosyltransferase activity;
- (g) a protein consisting of an amino acid sequence in which one or more amino acid(s) is/are deleted, substituted, inserted and/or added in the amino acid sequence represented by SEQ ID NO:7 and having α 1,6-fucosyltransferase activity;
- (h) a protein consisting of an amino acid sequence in which one or more amino acid(s) is/are deleted, substituted, inserted and/or added in the amino acid sequence represented by SEQ ID NO:8 and having α 1,6-fucosyltransferase activity;
- (i) a protein consisting of an amino acid sequence which has 80% or more homology to the amino acid sequence represented by SEQ ID NO:5 and having α 1,6-fucosyltransferase activity;

- (j) a protein consisting of an amino acid sequence which has 80% or more homology to the amino acid sequence represented by SEQ ID NO:6 and having α 1,6-fucosyltransferase activity;
- (k) a protein consisting of an amino acid sequence which has 80% or more homology to the amino acid sequence represented by SEQ ID NO:7 and having α 1,6-fucosyltransferase activity;
- (l) a protein consisting of an amino acid sequence which has 80% or more homology to the amino acid sequence represented by SEQ ID NO:8 and having α 1,6-fucosyltransferase activity.

5. **(Currently Amended)** The process according to ~~any one of claims 1 to 4,~~ wherein the cell into which the RNA having activity of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain is introduced is a cell which is resistant to a lectin which recognizes a sugar chain structure in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in an N-glycoside-linked sugar chain.

6. **(Original)** The process according to claim 5, wherein the cell is resistant to at least one lectin selected from the group consisting of the following (a) to (d):

- (a) a *Lens culinaris* lectin;

- (b) a *Pisum sativum* lectin;
- (c) a *Vicia faba* lectin;
- (d) an *Aleuria aurantia* lectin.

7. **(Currently Amended)** The process according to ~~any one of claims 1 to 6,~~
wherein the cell is selected from the group consisting of a yeast cell, an animal cell, an
insect cell and a plant cell.

8 **(Currently Amended)** The process according to ~~any one of claims 1 to 7,~~
wherein the cell is a cell selected from the group consisting of the following (a) to (i):

- (a) a CHO cell derived from Chinese hamster ovary tissue;
- (b) a rat myeloma cell line YB2/3HL.P2.G11.16Ag.20 cell;
- (c) a mouse myeloma cell line NS0 cell;
- (d) a mouse myeloma cell line SP2/0-Ag14 cell;
- (e) a BHK cell derived from Syrian hamster kidney tissue;
- (f) an antibody-producing hybridoma cell;
- (g) a human leukemia cell line Namalwa cell;
- (h) an embryonic stem cell;
- (i) a fertilized egg cell.

9. **(Currently Amended)** The process according to ~~any one of claims 1 to 8~~, wherein the cell is a transformant into which a gene encoding an antibody molecule is introduced.

10. **(Original)** The process according to claim 9, wherein the antibody molecule is selected from the group consisting of the following (a) to (d):

- (a) a human antibody;
- (b) a humanized antibody;
- (c) an antibody fragment comprising the Fc region of (a) or (b);
- (d) a fusion protein comprising the Fc region of (a) or (b).

11. **(Currently Amended)** The process according to claim 9 ~~or 10~~, wherein the antibody molecule belongs to an IgG class.

12. **(Currently Amended)** The process according to ~~any one of claims 1 to 11~~, wherein the antibody composition is an antibody composition having higher antibody-dependent cell-mediated cytotoxic activity than an antibody composition produced by a parent cell into which a double-stranded RNA comprising an RNA selected from the following (a) or (b) and its complementary RNA is not introduced:

- (a) an RNA comprising the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30;

(b) an RNA consisting of a nucleotide sequence in which one or several nucleotide(s) is/are deleted, substituted, inserted and/or added in the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30 and having activity of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain.

13. **(Original)** The process according to claim 12, wherein the antibody composition having higher antibody-dependent cell-mediated cytotoxic activity is an antibody composition which comprises antibody molecules having complex type N-glycoside-linked sugar chains in the Fc region, and in which a ratio of sugar chains in which fucose is not bound to N-acetylglucosamine in the reducing end in the sugar chains among the complex type N-glycoside-linked sugar chains is higher than that of an antibody composition produced by the parent cell.

14. **(Original)** The process according to claim 13, wherein the complex type N-glycoside-linked sugar chains are sugar chains in which 1-position of fucose is not bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in the sugar chains.

15. **(Currently Amended)** The process according to ~~any one of claims 12 to 14~~, wherein the antibody composition having higher antibody-dependent cell-mediated

cytotoxic activity is an antibody composition which comprises antibody molecules having complex type N-glycoside-linked sugar chains in the Fc region, and in which the ratio of sugar chains in which fucose is not bound to N-acetylglucosamine in the reducing end in the sugar chains among the complex type N-glycoside-linked sugar chains is 20% or more.

16. **(Currently Amended)** The process according to ~~any one of claims 12 to 15~~, wherein the antibody composition having higher antibody-dependent cell-mediated cytotoxic activity is an antibody composition which comprises antibody molecules having complex type N-glycoside-linked sugar chains in the Fc region, and in which the complex type N-glycoside-linked sugar chains are sugar chains in which fucose is not bound to N-acetylglucosamine in the reducing end.

17. **(Currently Amended)** A cell into which an RNA capable of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain is introduced, and which is used in the process according to ~~any one of claims 1 to 16~~.

18. **(Original)** The cell according to claim 17, wherein the enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position

of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain is α 1,6-fucosyltransferase.

19. **(Original)** A cell in which an RNA selected from RNAs of the group consisting of the nucleotide sequences represented by any one of SEQ ID NOs:9 to 30 is introduced or expressed.

20. **(Original)** A double-stranded RNA consisting of an RNA selected from the following (a) or (b) and its complementary RNA:

(a) an RNA comprising the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30;

(b) an RNA consisting of a nucleotide sequence in which one or several nucleotide(s) is/are deleted, substituted, inserted and/or added in the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30 and having activity of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain.

21. **(Original)** A DNA corresponding to the RNA described in claim 20 and a complementary DNA to the DNA.

22. **(Original)** A recombinant DNA which is obtainable by introducing a DNA corresponding to the RNA described in claim 20 and a complementary DNA to the DNA into a vector.

23. **(Currently Amended)** The recombinant DNA according to claim 22, which expresses the double-stranded RNA ~~according to claim 20~~ consisting of an RNA selected from the following (a) or (b) and its complementary RNA:

(a) an RNA comprising the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30;

(b) an RNA consisting of a nucleotide sequence in which one or several nucleotide(s) is/are deleted, substituted, inserted and/or added in the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30 and having activity of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain.

24. **(Currently Amended)** A transformant which is obtainable by introducing the recombinant DNA according to claim 22 ~~or 23~~ into a cell.

25. **(Original)** A method for constructing a cell which is resistant to a lectin which recognizes a sugar chain structure in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type

N-glycoside-linked sugar chain, which comprises introducing or expressing the double-stranded RNA described in claim 20 in a cell.

26. **(Original)** The method according to claim 25, wherein the cell which is resistant to a lectin which recognizes a sugar chain structure in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain is resistant to at least one lectin selected from the group consisting of the following (a) to (d):

- (a) a *Lens culinaris* lectin;
- (b) a *Pisum sativum* lectin;
- (c) a *Vicia faba* lectin;
- (d) an *Aleuria aurantia* lectin.

27. **(Original)** A method for suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain, which comprises using an RNA selected from RNAs of the group consisting of the nucleotide sequences of any one of SEQ ID NOs:9 to 30.

28. **(Original)** The method according to claim 27, wherein the enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to

6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type

N-glycoside-linked sugar chain is α 1,6-fucosyltransferase.